

**EDITORIAL ADVISORY BOARD
OF THE SAE UTILITIES COMMITTEE
PREPARING AE-8**

John F. Hoelzle
Long Island Lighting Company

O. C. Amrhyn
American Telephone and Telegraph Company

Gary A. McAlexander
Baker Equipment Engineering Company, Inc.

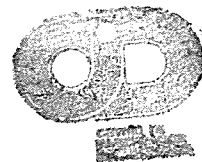


Table of Contents

Equipment

Aerial Lift Stability During Overhead Wire Stringing, Bertram J. Leigh	3
Guide Posts for Design of Filament Wound Booms for Aerial Devices, Ray S. M. Wilde	11
Structural Design Considerations of an Aerial Device, John G. Keck and Joseph D. Patton	17
Mission Possible—Selecting Utility Truck Package, D. H. Groft, Albert E. Reske, and George H. Eckels	27
The Rebuilding of an Aerial Lift and Body with Financial Considerations, David B. Seymour	49
How to Buy an Aerial Device for a Utility Truck, Weston R. Poyner	57
Mechanized Utility Trucks—A Complete Package, Richard L. Bailey	63
Electric Trailer Brakes, Donald D. Brown	67
The Basics of Inertia-Operated Hydraulic Trailer Braking, E. DeAngelis	71
Major Overhauling of the Utility Digger Derrick Truck, Terry L. Godier	77
How to Buy a Digger Derrick, Edward L. Anderson	81
Auxiliary Drive Systems for Aerial Devices, David Stephen and David Sullivan	89
Continuous-Duty Winch Rates 10,000-lb. Capacity, O. C. Amrhyn	95
A Look at Winches for Utility Vehicles, J. E. Morrow	99

Chassis & Components

Frame Stress Considerations in Mounting Utility Man Lifts and Derricks, R. D. Rase and J. L. Williams	109
Truck Chassis Frame Considerations in Equipment Mounting, G. C. Carver	117
Selection of Frames, Springs, and Axles for Utility Vehicles, A. R. Kaduk, G. Mladi, and E. D. Clise	133
Weight Distribution in Straight Trucks, Brant V. Clark	145
Weight Distribution in Tractor Trailers, Brant V. Clark	149
Axle Loads and Center of Gravity Calculations, prepared by Truck Body and Equipment Association, Inc.	153

Developments to Utilize Hydraulic Service Brakes for Heavy Duty or High Frequency Parking, Fred W. Cords	155
What is Expected of Today's Power Take-Offs, R. W. Wagner	163
Eight Bolt Power Take-Off Drives for Transmitting Higher Torques for Auxiliary Equipment, R. W. Wagner	169
A Look at Geared Split-Shaft Power Take-Offs for the Public Utility Industry, R. A. Hill	173
Light Truck Fuel Economy by Design Efficiency, D. J. Bickerstaff	183
Requirements of Truck Chassis for Rotating Derricks, W. L. Peterson	229
High Strength Steel Siderails—A Comparative Evaluation, G. L. Satava, J. F. Martin, and E. G. Hamburg	245
Recommended Practice for Chassis Modifications—Vehicles over 10,000 lbs GWVR TBEA Standard 001 May 1978, prepared by Truck Body and Equipment Association, Inc.	261

Body

Evaluation of Material for Utility Vehicle Bodies, Arthur F. Dicker	269
---	-----

General Hydraulics

Typical Control Systems for Insulated Aerial Devices and Hydraulic Fluid Requirements for These Units, Roy Balogh	275
Design and Layout of Basic Hydraulic Systems for Derrick and Digger Equipment on Utility Vehicles, Dean E. Broderson	281
Hydraulic Surge—Its Effect on Hose Performance in Utility Vehicles, John C. Abbey	287
Horsepower Requirements of Utility Truck Hydraulic Systems, Donald H. Groft	295
Hydraulic Pumps, Valves and Motors as Applied to Utility Vehicles, George Atland	305
Practical Hydraulics, George Atland	311

Terminology, Nomenclature, and Safety Standards

Standards Making Organizations	349
Vehicle Certification	351
A Guide to Motor Vehicle Safety Standards	365
Glossary of Terms for Van Bodies and Components	381
Glossary of Terms for Hydraulic Hoist - Dump Bodies	393
Glossary of Terms for Elevating Gates	401
Nomenclature—Utility Backhoe—SAE J326	405

Specification Definitions—Hydraulic Backhoes—SAE J49	406
Hydraulic Backhoe Lift Capacity—SAE J31	409
Excavator Hoe Bucket Rating—SAE J296	410
Component Nomenclature—Rollers/Compactors—SAE J1017	411
Nomenclature and Specifications for Extensible Aerial Devices	414
Nomenclature and Specifications for Articulating Aerial Devices	418
Nomenclature and Specifications for Digger-Derricks	422
Nomenclature and Specifications—Chain Line Trenchers	427
Nomenclature and Specifications—Direct Burial Plows	435

Appendix

Use of SI (Metric) Units	447
------------------------------------	-----

References

References to Other Related Material	465
Index	469